

## 2/C, 3/C, 4/C CU 600 V FR-XLPE PVC Jacket Power Cable. Color Method 1 Table 1

Type TC-ER Power Cable 600 or 1000 Volt Three Conductor Copper, Fire Retardant Cross-Linked Polyethylene (FR-XLPE) insulation Polyvinyl Chloride (PVC) Jacket. Conductor Identification Method 1 Table 1



Image not to scale. See Table 1 for dimensions.

### CONSTRUCTION:

- Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
- Insulation:** Fire Retardant Cross-Linked Polyethylene (FR-XLPE)
- Filler:** Paper or Polypropylene filler
- Binder:** Polyester flat thread binder tape
- Rip Cord:** Rip cord for ease of jacket removal
- Overall Jacket:** Polyvinyl Chloride (PVC) Jacket

### APPLICATIONS AND FEATURES:

Southwire's 600 Volt control cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, aerial supported by a messenger, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 90°C for normal operation in wet and dry locations, 130°C for emergency overload, and 250°C for short circuit conditions. UL rated constructions can be used in Class I, II, and III, Division 2 hazardous locations per NEC Article 501 and 502. UL rated constructions with 3 or more conductors are listed for exposed runs (TC-ER) per NEC 336.10.

### SPECIFICATIONS:

- ASTM B3 Standard Specification for Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- UL 44 Thermoset-Insulated Wires and Cables
- UL 1277 Electrical Power and Control Tray Cables
- UL 1685 FT4 Vertical-Tray Fire Propagation and Smoke Release Test
- CSA *CSA marking is available upon request*
- CSA C22.2 No.230 Tray Cables - Rated TC-ER
- ICEA S-58-679 Control Cable Conductor Identification Method 1 Table 1
- ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy
- IEEE 1202 FT4 Vertical Tray Flame Test (70,000 Btu/hr) and ICEA T-29-520 - (210,000 Btu/hr)



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**SAMPLE PRINT LEGEND:****UL Listed**

SOUTHWIRE E75755 {UL} XX AWG X/C FR-XLPE (XHHW-2) CDRS 90{D}C PVC JKT 600V TYPE TC-ER SUN. RES. DIRECT BURIAL YEAR {SEQUENTIAL FOOTAGE MARKS} SEQ FEET

**Non UL Listed**

SOUTHWIRE X AWG X/C FR-XLPE CDRS 90C PVC JKT SUN. RES. DIR. BUR. 600V {MM/DD/YYYY} {SEQUENTIAL FOOTAGE MARKS} SEQ FEET

**CSA Listed**

SOUTHWIRE #P 156205 CSA XX AWG X/C FR-XLPE CDRS 90C PVC JACKET, -40C, FT-4, SUN RES, DIR BUR, 600V {MM/DD/YYYY} {SEQUENTIAL FOOTAGE MARKS} SEQ FEET



**Table 1 – Physical and Electrical Data**

| Stock Number        | Cond. Size | Cond. Number | Diameter Over Cond. | Insul. Thickness | Diameter Over Insulation | Jacket Thickness | Approx. OD | Approx. Weight | DC Resistance @ 25°C | AC Resistance @ 90°C | Min Bending Radius | Allowable Ampacity At 60°C * | Allowable Ampacity 75°C * | Allowable Ampacity 90°C * |
|---------------------|------------|--------------|---------------------|------------------|--------------------------|------------------|------------|----------------|----------------------|----------------------|--------------------|------------------------------|---------------------------|---------------------------|
|                     | AWG        | No.          | inch                | mil              | inch                     | mil              | inch       | lb /1000ft     | Ω /1000ft            | Ω /1000ft            | inch               | Amp                          | Amp                       | Amp                       |
| 619504 <sup>^</sup> | 8          | 2            | 0.142               | 45               | 0.232                    | 60               | 0.592      | 206            | 0.653                | 0.849                | 2.4                | 40                           | 50                        | 55                        |
| 619507 <sup>^</sup> | 8          | 3            | 0.142               | 45               | 0.232                    | 60               | 0.629      | 286            | 0.653                | 0.849                | 2.5                | 40                           | 50                        | 55                        |
| 619508              | 8          | 4            | 0.142               | 45               | 0.232                    | 60               | 0.688      | 352            | 0.653                | 0.849                | 2.8                | 32                           | 40                        | 44                        |
| 619512 <sup>^</sup> | 6          | 3            | 0.174               | 45               | 0.268                    | 60               | 0.707      | 395            | 0.411                | 0.514                | 2.8                | 55                           | 65                        | 75                        |
| 619514              | 6          | 4            | 0.174               | 45               | 0.268                    | 60               | 0.775      | 522            | 0.411                | 0.514                | 3.1                | 44                           | 52                        | 60                        |
| 600851 <sup>^</sup> | 6          | 4            | 0.178               | 45               | 0.268                    | 60               | 0.775      | 493            | 0.411                | 0.514                | 3.1                | 44                           | 52                        | 60                        |
| 619517 <sup>^</sup> | 4          | 3            | 0.221               | 47               | 0.315                    | 60               | 0.800      | 576            | 0.258                | 0.323                | 3.2                | 70                           | 80                        | 95                        |
| 619518              | 4          | 4            | 0.221               | 45               | 0.311                    | 80               | 0.919      | 758            | 0.258                | 0.323                | 3.6                | 56                           | 68                        | 76                        |
| 619524              | 2          | 3            | 0.277               | 45               | 0.367                    | 80               | 0.953      | 861            | 0.162                | 0.203                | 3.8                | 95                           | 115                       | 130                       |
| 661676              | 2          | 4            | 0.277               | 45               | 0.377                    | 80               | 1.053      | 1137           | 0.162                | 0.203                | 5.2                | 76                           | 92                        | 104                       |

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

\* Ampacities are based on Table 310.15 (B)(16) of the NEC, 2017 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts, based on ambient temperature of 30°C (86°F)

<sup>^</sup> UL listed part number

